

WHAT IS CLAIMED IS:

1. An on-vehicle DSRC apparatus including
a main body of the on-vehicle DSRC apparatus to be mounted on a motor vehicle;
a signal processing unit provided in said main body of said on-vehicle DSRC apparatus;
an external storage medium insertion slot which is integrally formed in said main body of said on-vehicle DSRC apparatus and into which an external storage medium can removably be inserted; and
an antenna array electrically connected to said signal processing unit to perform intercommunication with on-road equipment,
wherein said signal processing unit is designed to process signals received through said antenna array and send out a variety of signals to said on-road equipment through transaction of information with said external storage medium inserted in said external storage medium insertion slot,
said on-vehicle DSRC apparatus further comprising:
a mounting member for mounting said antenna array at a predetermined location of said motor vehicle; and
antenna angle holding means mounted swingably on said mounting member for holding the angle of said antenna array relative to the horizontal plane of said motor vehicle within a predetermined range of angle,
wherein said antenna angle holding means is designed to set said predetermined range of angle such that a proper angle can be ensured for enabling intercommunication between said on-road equipment and said antenna array within said predetermined communication area.
2. An on-vehicle DSRC apparatus according to claim 1,
wherein said antenna angle holding means is constituted by a balance member pivotally mounted on said mounting member, and
wherein the angle of said antenna array relative to a mounting face of said mounting member is held within a constant

range of angle associated with said predetermined range of angle.

3. An on-vehicle DSRC apparatus according to claim 2,
wherein said balance member has a weight attached at
least one location of said balance member.
4. An on-vehicle DSRC apparatus according to claim 3,
wherein said weight is made of a metal having electrical
conductivity and connected to a grounding terminal of said antenna
array.
5. An on-vehicle DSRC apparatus according to claim 2,
further comprising:
a rotation angle limiting mechanism for limiting a
rotation angle range of said balance member relative to said
mounting member.
6. An on-vehicle DSRC apparatus according to claim 1,
wherein said mounting member is constituted by said main
body of said on-vehicle DSRC apparatus.
7. An on-vehicle DSRC apparatus according to claim 1,
wherein said mounting member is disposed separately from
said main body of said on-vehicle DSRC apparatus, and
wherein said antenna array is electrically connected to
said signal processing unit by way of a cable.
8. An on-vehicle DSRC apparatus according to claim 1,
wherein said mounting member is mounted on a windshield
surface or alternatively on a dashboard of said motor vehicle.